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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* CHRISTOPHER CHARLES MCCORMICK and  
CHRISRTOPHER JOHN CHARLES WHISTON

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Appeal 2009-006479  
Application 09/668,688  
Technology Center 1700

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Before CATHERINE Q. TIMM, BEVERLY F. FRANKLIN, and  
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The one-month time period for filing a request for rehearing, as recited in 37 C.F.R. § 41.79, and the two-month time period for filing an appeal, as recited in 37 C.F.R. § 1.304 (*see* 37 C.F.R. § 1.983(b)(1)), both begin to run from the “MAIL DATE” shown on the PTOL-90A cover letter attached to this decision.

### STATEMENT OF THE CASE

Appellants seek our review under 35 U.S.C. § 134 of the Examiner's final decision rejecting claims 20, 22-32, and 34-40. We have jurisdiction over the appeal under 35 U.S.C. § 6(b).

We REVERSE and enter a NEW GROUND OF REJECTION under 37 C.F.R. § 41.50(b).

Claim 20 is illustrative of the subject matter on appeal:

20. A method comprising:

receiving, at a data processing system, a requirement from a prospective purchaser for a first chemical;

comparing, in said data processing system, said requirement to analyses of batches of said first chemical that are available for purchase from at least two different suppliers through said data processing system to identify a batch that satisfies said requirement, wherein said analyses are obtained from a testing facility that tests samples of said batches in accordance with a uniform standard that is established for said first chemical, and further wherein each batch that is available for purchase is analyzed by said testing facility; and

outputting, from said data processing system, an indicium of said identified batch to said prospective purchaser.

(App. Br. 23, Claims Appendix.)

Appellants appeal the following rejections (Appeal Brief filed February 25, 2008 (hereinafter "App. Br.") 13):

1. Claims 20, 24, 26-29, 31, 32, 34, 37, and 39 under 35 U.S.C. § 102(e) as anticipated by or, in the alternative, under U.S.C. § 103(a) as obvious over Schuller (US 6,882,980 B1, issued Apr. 19, 2005).
2. Claims 22, 23, 25, 30, 35, 36, 38, and 40 under 35 U.S.C. § 103(a) as

unpatentable over Schuller.<sup>2</sup>

## ISSUE

Did the Examiner err in finding that Schuller discloses batches of chemical that are available for purchase where each batch that is available for purchase is analyzed by a testing facility?

## FACTUAL FINDINGS

1. Schuller discloses a computer implemented element for processing transactions involving chemical products, such as paints or other coatings. (Col. 1, ll. 40-42, col. 2, ll. 12-13.)
2. Schuller discloses that “[a]fter a recipe has been approved by a purchaser, the site 120 can complete order processing by interacting with [the] seller . . . In some cases (e.g. raw material purchases) the system can interact with other manufacturer and shipper systems to material shipments [sic] from warehouse(s) to the user.” (Col. 4, ll. 27-33.)
3. Schuller discloses that “[t]he system also may schedule shipment of raw materials from different warehouse sites to a product blending and manufacturing site where processing of the raw materials into a completed product can take place. The completed product can then be shipped to the user.” (Col. 4, ll. 33-37.)

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<sup>2</sup> The Examiner entered a new ground of rejection for claim 40 in the Examiner’s Answer (Examiner’s Answer mailed December 19, 2008 (hereinafter “Ans.”) 3), which Appellants contest in the Reply Brief. Reply Brief filed Feb. 19, 2009, (hereinafter “Rep. Br.”) 2.)

4. Schuller discloses that if a user does not want to use a preexisting paint recipe, the user inputs desired target characteristic information, which is compared to existing paint recipes to produce a ranking of best-to-worst starting point formulations. (Col. 4, ll. 38-64.)
5. Schuller discloses that the system “may calculate the characteristics of a product produced according to user-modifications of a starting point recipe.” (Col. 5, ll. 14-18.)

### PRINCIPLES OF LAW

In order to establish a prima facie case of obviousness, the Examiner must show that each limitation of the claim is described or suggested by the prior art or would have been obvious based on the knowledge of those of ordinary skill in the art. *See, e.g., In re Fine*, 837 F.2d 1071, 1074 (Fed. Cir. 1988).

### ANALYSIS

The Examiner found that Schuller discloses “a purchasing system, where the clients can purchase batches of the chemicals in the database (e.g., raw materials; see col. 4, line 27, et seq.).” (Ans. 4.) The Examiner also stated that “Schuller teaches a system where raw materials from different warehouses are shipped to a product blending and manufacturing site, where the completed product (existing batch) is then shipped to the user.” (Ans. 10.)

Appellants argue that Schuller does not disclose existing batches of paint are available for purchase or that each of the batches analyzed. (App. Br. 16.) Appellants contend that the raw materials disclosed by Schuller are

used to create or modify paint formulations or recipes, and that there is no disclosure that the characteristic information present in the data base is obtained from actual batches. (Rep. Br. 5-6.) Appellants argue that in Schuller, the raw materials purchased are shipped to a manufacturer for production of a batch, and therefore the batch is not an existing batch that is analyzed and sold through Schuller's system. (Rep. Br. 6-7.) We agree.

Specifically, Schuller does not disclose that the raw material data is data from a specific "batch" of a chemical available for purchase, only that the raw materials are available from different warehouse sites. (FF 2 & 3.) Schuller is silent as to whether the raw material data present is attributable to a specific batch that has been analyzed by a testing facility. (*Id.*) In addition, as Appellants correctly point out, the target characteristic information provided by a purchaser in Schuller's method of custom paint formulations generates a ranking of suitable starting formulations, not existing batches that meet the characteristics identified by the purchaser. (Rep. Br. 6-7; FF 4.) The target characteristics of the modified product are then calculated by the system. (FF 5.) Thus, Schuller does not disclose existing batches of chemicals available for purchase, which have been analyzed by a testing facility. Accordingly, Appellants have identified error in the Examiner's finding that Schuller discloses all the limitations of the claims.

The Examiner provides no other rationale to establish that it would have been obvious to one of ordinary skill in the art to have modified Schuller in order to provide data on existing batches of chemicals available for purchase.

Therefore, we also do not sustain the Examiner's rejections of the claims under either 35 U.S.C. § 102(e) or § 103(a).

#### NEW GROUND OF REJECTION

The following new ground of rejection is entered pursuant to 37 C.F.R. § 41.50(b).

Claims 20, 22-32, and 34-40 are rejected under 35 U.S.C. § 101 because the claims are directed to non-statutory subject matter.

#### ADDITIONAL FINDINGS OF FACT

The record supports the following additional findings of fact (FF) by a preponderance of the evidence:

6. Independent claims 20, 31, and 37 each recite a method including receiving a requirement from a prospective purchaser for a chemical at a data processing system.
7. Independent claims 20, 31, and 37 each recite that the requirement for a chemical is compared with analyses of batches of a chemical that are available for purchase via the data processing system.
8. Appellants' Specification discloses that the data processing system comprises a data network interface, a telephone network interface, telephone center, computer, data storage device, local output device and local input device. (Spec, 8, l. 12 – 10, l. 8.)

#### ANALYSIS

Under § 101, four categories of subject matter are eligible for patent protection: (1) processes; (2) machines; (3) manufactures; and (4) compositions of matter. 35 U.S.C. § 101. The Supreme Court has made clear that in evaluating subject matter for patentability under § 101,

“‘Congress plainly contemplated that the patent laws would be given wide scope.’” *Bilski v. Kappos*, 130 S.Ct. 3218, 3225 (2010) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)). However, the Supreme Court has identified three specific exceptions to § 101: laws of nature, physical phenomena, and abstract ideas. *Id.*

In addition, the Court has stated:

The Information Age empowers people with new capacities to perform statistical analyses and mathematical calculations with a speed and sophistication that enable the design of protocols for more efficient performance of a vast number of business tasks. If a high enough bar is not set when considering patent applications of this sort, patent examiners and courts would be flooded with claims that would put a chill on creative endeavor and dynamic change.

*Id.*, at 3229.

The Court stated that while the “machine-or-transformation test” set forth in *In re Bilski*, 545 F.3d 943 (Fed Cir. 2008) (en banc), is an investigative tool for determining whether some inventions are processes under § 101, “[t]he machine-or-transformation test is not the sole test in deciding whether an invention is a patent-eligible ‘process.’” *Id.*, at 3227. The Court also stated: “[i]n disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit’s development of other limiting criteria that further the purpose of the Patent Act and are not inconsistent with its text.” *Id.*, at 3231.

In *Research Corp. Tech., Inc. v. Microsoft Corp.*, 2010 WL 4971008 (Fed. Cir. 2010), the Federal Circuit, in reversing the district court’s determination that several claims directed to a method of halftoning color images, declined “to define the meaning of ‘abstract’ beyond the recognition



that this disqualifying characteristic should exhibit itself so manifestly as to override the broad statutory categories of eligible subject matter and the statutory context that directs primary attention on the patentability criteria of the rest of the Patent Act.” 2010 WL 4971008 at \*7.

The Federal Circuit also stated that “inventions with specific applications or improvements to technologies in the marketplace are not likely to be so abstract that they override the statutory language and framework of the Patent Act.” *Id.*

In *Prometheus Laboratories, Inc. v. Mayo Collaborative Services*, 2010 WL 5175124 (Fed. Cir. 2010), the Federal Circuit reversed the district court’s determination that certain claims direct to a method of optimizing therapeutic efficacy were invalid under § 101, because the method recited a series of specific treatment steps, did not preempt the naturally occurring correlations between metabolite levels and efficacy and toxicity, and did not involve mere insignificant post-solution activity; and also because the claims satisfied the transformation prong of the machine-or-transformation test. 2010 WL 5175124 at \*7-9.

The presence of a mathematical algorithm in a claim need not be expressly recited, but may be inherent to the claim. *In re Schrader*, 22 F.3d 290, 293 (Fed. Cir. 1994). In *Schrader*, the claims were directed to a method of competitively bidding on a plurality of items involving identifying a plurality of related items in a record, offering the items to a plurality of potential bidders, receiving bids on the items, indexing the bids, identifying a prevailing total price, and identifying all of the bids corresponding to the total price. *Id.*, at 292. The Federal Circuit stated that

the presence of a mathematical algorithm was inherent to the claim. *Id.*, at 293.

The presence of a mathematical algorithm is not per se fatal to whether a process is statutory under § 101. *Diamond v. Diehr*, 450 U.S. 175, 187 (1981) (“It is now commonplace that an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection”). Rather, the claims must be considered as a whole, and specifically whether the claim is performing a function that which the patent laws were designed to protect. *Id.*, at 188, 192. *Research Corp.*, 2010 WL 4971008 at \*7-8.

In *In re Grams*, the Federal Circuit stated that the analysis in *Diehr*:  
can be difficult, it is facilitated somewhat if, as here, the only physical step involves merely gathering data for the algorithm. As stated in *In re Christensen*, 478 F.2d 1392, 1394, 178 USPQ 35, 37-38 (CCPA 1973):

Given that the method of solving a mathematical equation may not be the subject of patent protection, it follows that the addition of the old and necessary antecedent steps of establishing values for the variables in the equation cannot convert the unpatentable method to patentable subject matter.

*In re Grams*, 888 F.2d 835, 839 (Fed. Cir. 1989.)

This is consistent with *Schrader*, where the Federal Circuit did not find any data transformation present in the claim, but that entering bids into a record was analogous to a data gathering step, which was insufficient to support patentability to a claim. *Schrader*, 22 F.3d at 294. The Federal Circuit noted that such an analysis was consistent with Supreme Court precedent in *Parker v. Flook*, 437 U.S. 584, 590 (1978) involving insignificant post-solution activity. *Id.*

The USPTO has recently provided factors to aid in evaluating whether method claims are patent eligible. *Interim Guidance for Determining Subject Matter Eligibility for Process Claims in View of Bilski v. Kappos*, 75 Fed. Reg. 143, 43922-43928 (July 27, 2010). The relevant factors to the present claims on appeal weighing toward eligibility include: Recitation of a Machine - where the machine implements the claimed steps; and the claim is more than a mere statement of a concept – the claim implements a concept in some tangible way. *Id.* at 43927. The relevant factors to the present claims on appeal weighing against eligibility include: insufficient recitation of a machine – involvement of machine with the steps is nominal, insignificant, or tangentially related to the performance of the steps, *e.g.*, data gathering and machine is generically recited such that it covers any machine capable of performing the claimed step(s); and the claim is a mere statement of a general concept – use of the concept, as expressed in the method would effectively grant a monopoly over the concept. *Id.*

Initially, we observe that claims 20, 31, and 37 recite a “data processing system”, but recite no further details as to the any specific components included in the data processing system. While the Specification recites specific components of the data processing system (FF 8), we decline to import such limitations into the claims. *In re Van Geuns*, 988 F.2d 1181, 1184 (Fed. Cir. 1993). Thus, although claims 20, 31, and 37 recite a machine, the machine is only generally recited, a factor weighing against patent eligibility.

We also determine that claims 20, 31, and 37 recite two data gathering steps: (1) receiving a requirement from a prospective purchaser for a chemical; and (2) receiving analyses of batches of the chemical. In this

regard, we note that the physical steps of performing the analyses of the batches at a testing facility are merely antecedent steps required to generate the data collected by the data processing system. Accordingly, the data processing system is only tangentially related to the performance of these data-gathering steps, a factor weighing against patent eligibility.

As explained above, the claim *as a whole* must be evaluated as to whether it is patent eligible. Claims 20, 31, and 37 expressly recite that the requirement and the analyses of batches are compared in the data processing system. Accordingly, the data processing system implements the claimed method, a factor weighing in favor of patent eligibility. However, in order to compare the requirement of the chemical from the prospective purchaser with the analyses of batches of chemical present in the data processing system, a mathematical algorithm would be required. Thus, similar to the court in *Schrader*, we determine that although independent claims 20, 31, and 37 do not expressly recite a mathematical algorithm, a mathematical algorithm is inherently recited in the claims. Therefore, while the data processing system is intimately involved in comparing the requirement for a chemical with analyses of chemicals, such involvement is in the form of applying a mathematical algorithm in order to compare mathematical values corresponding to the requirement and analyses of batches. Accordingly, the comparing step in the claims does not require any physical steps, and thus relates to no more than an abstract idea or general concept, a factor weighing against patent eligibility.

In addition, the step of outputting an indicium of the identified batch amounts to insignificant post solution activity, which is not sufficient to make the recited process statutory under § 101. *Diehr*, 450 U.S. at 215.

Outputting the result of the algorithm used to match the requirement with the corresponding batch does not constitute part of the inventive concept, it is merely a way to output the result of the mathematical algorithm.

The presently claimed method is also distinguishable from the methods claimed in *Research Corp.* and *Prometheus*. Specifically, unlike the method in *Research Corp.*, which produces a halftone image of a digital image, the present method merely compares data values. (*Research Corp.*, 2010 WL 4971008 at \*7; FF 7.) Moreover, unlike the methods in *Prometheus*, there is no physical transformation, and the receiving of requirements in the instant claims are merely data gathering steps. *Prometheus*, 2010 WL 5175124 at \*7-10. Indeed, the Federal Circuit stated that the mental steps of the method claims were not patentable per se, but that in combination with the other steps that were transformative in nature, the methods were sufficient to satisfy § 101. *Id.*, at \*10.

Accordingly, we determine that the evidence, when considered in view of the factors discussed above applied to the claims as a whole, weigh against a determination that the claims are directed to patent eligible subject matter. Therefore, claims 20, 22-32, and 34-40 are rejected under 35 U.S.C. § 101.

## DECISION

We reverse the Examiner's § 102 and § 103 rejections.

Claims 20, 22-32, and 34-40 are rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

This decision contains a new ground of rejection pursuant to 37 C.F.R. § 41.50(b). 37 C.F.R. § 41.50(b) also provides that the

Appellants, *WITHIN TWO MONTHS FROM THE DATE OF THE DECISION*, must exercise one of the following two options with respect to the new ground of rejection to avoid termination of the appeal as to the rejected claims:

(1) *Reopen prosecution*. Submit an appropriate amendment of the claims so rejected or new evidence relating to the claims so rejected, or both, and have the matter reconsidered by the Examiner, in which event the proceeding will be remanded to the Examiner . . . .

(2) *Request rehearing*. Request that the proceeding be reheard under § 41.52 by the Board upon the same record . . . .

No time period for taking any subsequent action in connection with appeal may be extending under 37 C.F.R. § 1.136(a)(1)(iv).

REVERSED

NEW GROUND OF REJECTION (37 C.F.R. §41.50(b))

rvb

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